MEETING SUMMARY
WATER RESOURCES ADVISORY COMMISSION
MINIMUM FLOWS AND LEVELS FOR BISCAYNE BAY ISSUES WORKSHOP
South Florida Water Management District
Location: Miami-Dade County Emergency Operations Center
9300 41st Street NW, Miami, Florida
Friday, June 25, 2004

Attendees:

Members:

Carol Rist

Alternates:

John Adornato
Bertha Goldenberg

Interested Parties:

Sarah Bellmund
Steve Blair
Valentina Caccia
Laura Feakes
Donna Fries
Jamie Furgang
Peter Harlem
Joan Lawrence
Karsten Rist

SFWMD Staff:

Rick Alleman
Scott Burns
Murray Miller
Dean Powell
Cecile Ross
Rick Smith
Trisha Stone

1. Introductions and Welcome by Rick Smith, WRAC Facilitator, SFWMD. Meeting called to order at 9:45 a.m. This meeting is to discuss issues of interest concerning Biscayne Bay. All attendees introduced themselves and stated their affiliation.

2. Minimum Flow and Levels (MFLs): Introduction, by Dean Powell, Director, Watershed Management Dept., SFWMD.

Mr. Dean outlined the agenda and said the goal of this meeting is to obtain further information and to identify anything that was missed in the report and get it to staff as soon as possible. Minimum flows and levels information will be presented and he asked for comments to be furnished by all interested parties.

The relationship between salinity and biology is in the presentation. A "Schedule for Establishment" was shown for the 2004 Minimum Flows and Levels Priority List. The list covers the Regional of Lower East Coast, Lower West Coast and Kissimmee Basin. This is a very aggressive schedule. This is not going to be easy, but working together they can move efficiently and get the project completed on time.

3. Legal and Policy Background, by Cecile Ross, Senior Attorney, Office of Counsel; Scott Burns, Director, Water Use Regulation Div., SFWMD.

Ms. Ross provided a brief overview of the law on this issue. The concepts will be review over and over again. She will be available to any questions on the legal issues concerning minimum flows and levels.

Definition of Minimum Flows and Levels is "Point at which further withdrawals cause 'significant harm' to water resources or ecology of the area". Information on the statute on "MFL establishment considerations and exclusions" was presented. The MFL recovery and prevention strategy is to prevent falling below MFL; achieve recovery of MFL as soon as practicable; phased strategy to provide for existing and projected reasonable-beneficial uses; and integrate into regional water supply plans. The Lower East Coast Regional Water Supply Plan Kick-Off meeting was held on June 24th and information on MFLs will be included in that Plan.

Examples of Recovery and Prevention Strategies were provided. Information was given on water resource and water supply development; regulation/water shortage; operations; and resource monitoring and research.

We are in the Rulemaking process. The upcoming agenda is:

Rule Development
Scientific Peer Review
Notice of Rulemaking
Comment Period/JAPC Review
Public Adoption Hearing (Governing Board)
File Rule with State

The development process is to identify: appropriate water resource functions; key harm indicators; baseline conditions of water resources; technical relationship between water resource impacts & changing hydrologic conditions; and the point at which significant harm occurs due to changing hydrologic conditions. These points will be reviewed over and over during this process.

Ms. Ross introduced Scott Burns and addressed what his portion of the presentation will contain.

Mr. Burns is responsible for the District's Consumptive Use Program. Chapter 373 deals with the establishment of consumptive use permitting. Information and definitions on "harm" and "significant harm" and "serious harm" were provided. The conceptual relationship among the Harm, Serious Harm, and Significant Harm standards was demonstrated.

Establishing drought conditions was explained. Cutbacks and restrictions on water during a drought were discussed. Information on the baseline and the formulation for rulemaking was presented by Mr. Burns.

The schedule for peer review was discussed. A representative of the Department of Interior is very interested in participating in the forum. Mr. Burns said an exchange of information between agencies is encouraged.

4. Resource Functions of the South Central Biscayne Bay Region, by Murray Miller, Senior Environmental Scientist, Planning and Development Division; and Trisha Stone, Supervising Professional, Coastal Ecosystems Division, SFWMD.

Mr. Miller presented information on the resources. The regions of Biscayne Bay are Snake Creek/Oleta River; North; Miami River; North Central; South Central; and South. A critical area is Biscayne National Park – the largest marine park with unique resources. Information on the Biscayne Bay Coastal Wetlands project was provided.

Constraints were discussed on the watershed conditions for flood control, water supply and water quality. The issues of importance for water managers were discussed, including the fact that canal stage targets are more difficult to maintain. The major constraints were identified.

Ms. Stone presented information on the technical discussion group that was formed to provide technical feedback to the District. The views of this technical discussion group were that salinity variations affect multiple species of flora and fauna; salinity variations stress Bay fauna; and salinity variations have contributed to the loss of near-shore mesohaline habitat.

The recommendations of the group were:

- Protect existing near-shore salinity until restoration of mesohaline zone can be accomplished; and
- Restoration = increased production of pink shrimp, grey snapper, snook, redfish and sea-trout.

Information provided on the review and analysis of existing available data and literature/documentation among freshwater flow and ecological relationships in Biscayne Bay; and seagrasses, associated fauna and faunal habitat requirements documentation and analysis. Documents are located on the District's website at: www.sfwmd.gov/org/wsd/mfl/biscaynebay/project_doc.htm.

The key words are "existing" and "available" data and literature. If the information was not available, it was not considered in the analysis. If any stakeholder has a document not in the database currently, they were instructed to send immediately to Murray Miller in order to be considered in the report. Any questions for the contractors may made by passing the questions through SFWMD staff or directly asking the contractor.

5. Proposed Salinity/Habitat Indicator, by Rick Alleman, Lead Environmental Scientist, Coastal Ecosystems Division, SFWMD.

Mr. Alleman presented information on the freshwater flows and the affects to the western parts of Biscayne Bay. Monitoring data was reviewed. There are approximately 20 stations for reporting data.

A short list of indicator species was reviewed. Over 42 + potential species were identified; and 8 are somewhat abundant. Filtering criteria included: reside in Biscayne Bay; dependent on freshwater input; and sufficiently documented. Information on sea trout and on juvenile crocodiles was provided. The approximate salinity preference ranges from 0 to 40 were discussed.

The development of the criteria was explained. The valued ecosystem component (VEC) is the system used and this system is widely used by the scientific community. The VEC assumptions for minimum flows and levels were reviewed.

Biodiversity benefits are to maintain ecosystem processes; enhance resilience; and affect society. Information on the linkage with habitat diversity was provided. A chart showing the VEC selection on *Species; Monitoring Ease; Abundance, Importance; and Affect on Population* was provided.

Discussion Session:
The decision process by which these tables were created was questioned by a stakeholder. Mr. Alleman said the information is being presented today and agreement needs to be reached. A lot of literature has been reviewed in order to come up with this short list. The importance of the chart was explained to be of *ecosystem importance*. Questions and answers on monitoring and what, if any, species will be excluded from the study. This is the typical approach for developing minimum flows and levels. Stakeholder requested that scientific information be explained in “lay man’s” terms for non-scientists.

Return to presentation with information on seagrass in the Bay. 80-90% is turtle grass and the remaining 10-20% are shoal, manatee and wigeon grasses. Diversity is important to protect. Report on shoal grass was provided and there were questions from stakeholders regarding moderate salinity.

Discussion:
Again, comments on establishing a baseline before beginning the reporting process. Mr. Alleman provided the requested information. Operational schedules for opening and closing of gates in the canals. Stakeholder asked for salinity data on how to obtain the data. High salinity in Biscayne Bay was discussed. The relationship between water quality and salinity levels is important for stakeholders to understand.

Return to presentation showed the response of shoal grass in the study area. Shoal grass productivity increased with decreased salinity. It competes better.

MFL recommendations for South Central Biscayne Bay are to maintain salinity gradient; use shoal grass as primary VEC; and use 7 other species as secondary indicators.

Stakeholder commented on ratio of grasses regarding information on salinity and shoal grasses locations. Mr. Alleman said the indicators will be worked out and explained how monitoring is done is very important. Ms. Ross provided information on the Rulemaking aspects of the statutes. Mr. Powell said as CERP moves forward, there will be adjustments for minimum flows and levels.

Return to presentation with further information on the MFL recommendations for South Central Biscayne Bay to maintain salinity gradient; use of shoal grass as primary VEC; and use of other species as secondary indicators.

Stakeholder asked for clarification on what exactly will be in the models to detect salinity and what salinity is being protected. Mr. Alleman said at the next meeting, further information will be provided. The biological community will be defined. Request from stakeholder for more information on the research available. Questions on what past and future harm to the Bay will be determined by this study. The plan will recognize if harm was in the Bay and will report how to fix the problem. Mr. Powell stated that the baseline conditions need to be set. Timelines and durations needs to be established. The minimum flows and levels process was explained. Use of historical data on ecosystems was discussed. A suite of indicators and a suite of organisms were requested by a stakeholder to be used in the study as there is more information out there that needs to be included. It was suggested that salinity relationships on organisms have been researched and should be considered in the study. Mr. Alleman provided information on the research. Request that a presentation on this research be on the next meeting agenda, along with the reason the study should or should not be included. Mr. Alleman requested the stakeholders send any studies they are interested in be sent to SFWMD staff.

Stakeholder requested further information on the reasoning by staff for setting the parameters of the study. What was the decision tree that was used? The criteria matrix is on the website. Seasonal data is considered in evaluations. Mr. Burns provided additional information on the ecology of the regimes the District is trying to protect. Development of minimum flows and levels for the Bay was explained by Mr. Burns. Groundwater modeling information was requested at a future meeting. Hydrology and water availability regarding the change in agricultural land use to urban use was explained and this will change the base flows and affect how the calculations are done. Further information provided by Mr. Burns on agricultural vs. urban land evaporation. The satellite images used in the mapping are from the year 2000.

6. Next Steps and Wrap Up, by Dean Powell.

The future agenda will present information on (1) Baseline Conditions and what the law allows to be considered; (2) more information on the decision making process on VEC and staff's recommendation on what should be the primary and secondary; (3) specific study with more information – and a reanalysis of why this study was or was not considered; (4) Primary vector (shoal grass) is that the best one to protect all the

critters and how it is protective of all species; (5) information on how the VEC is going to be applied and measured in the spatial aspect.

Next meeting will be held on Monday, July 26, 2004 in the same location. This will be an all day meeting.

7. Adjournment at 1:00 p.m.

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Paula Moree
Staff Business Operations Analyst